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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/505,227

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Alban Couturier

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SUGHRUE MION, PLLC

2100 Pennsylvania Avenue, N.W.

Washington, DC 20037

EXAMINER

CHRISS, ANDREW W

ART UNIT

PAPER NUMBER

2472

NOTIFICATION DATE

DELIVERY MODE

12/24/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/505,227	Applicant(s) COUTURIER, ALBAN	
	Examiner ANDREW CHRISS	Art Unit 2472	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Response to Appeal Brief

1. In view of the Appeal Brief filed on September 28, 2009, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/William Trost/

Supervisory Patent Examiner, Art Unit 2472.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent does not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. **Claims 1, 5-7, 9, 12 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Oosthoek et al (United States Patent Application Publication US 2002/0156599 A1), hereinafter Oosthoek, in view of Karagiannis et al (United States Patent Application Publication US 2002/0087699 A1), hereinafter Karagiannis.

Regarding Claims 1, 9, and 14, Oosthoek discloses an ingress node 16 that performs functionalities equivalent to Applicant's claimed means for receiving, control means, means for correlating, and means for communicating. Specifically, the ingress node comprises a per aggregate flow QoS management system (paragraph 0019), wherein an ingress node accepts flows of traffic to be aggregated in respective reservation states or classes (paragraph 0018). Further microflows are associated with requests comprising performance demands, such as bandwidth assurance, delay, and packet losses (paragraph 0017). When resource requests associated with individual microflows are received at an ingress node, they are grouped together for a resource request for an interior network (paragraph 0020). The reservation request on the internal network specifies an aggregated state to which it pertains, such as a DiffServ DSCP service class (paragraph 0020). The reservation request is carried out by sending a single

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resource request through the interior network to an egress node (paragraph 0020). A decision is then made as to whether to reserve the resources associated with the request (paragraphs 0020 and 0021). However, Oosthoek does not disclose effecting control of the network elements for a set of microflows. In the same field of endeavor, Karagiannis discloses an aggregator at the ingress to a Diffserv domain that aggregates resource requests without the need for resizing an aggregated state for network elements in the domain (Figures 4 and 13, paragraphs 0125-0133); therefore, for an aggregated state across the domain, the network elements are controlled once (e.g., at establishment of the state). It would have been obvious to combine the aggregated state maintenance without the need for resizing with the resource reservation disclosed in Oosthoek in order to minimize the amount of control traffic across a network and reduce the number of states that each core router must maintain (see paragraph 0040 of Karagiannis).

Regarding Claim 5, Oosthoek discloses granting a resource request if the resources are available, and denying the request if resources are not available (paragraphs 0020 and 0021), equivalent to Applicant's claimed "atomic" network monitoring.

Regarding Claim 6, Oosthoek discloses determining whether resources are available prior to making a change in a specified aggregated reservation state (paragraph 0020).

Regarding Claims 7 and 12, Oosthoek discloses an edge-to-edge aggregated reservation request wherein the individual flows are transparent to interior nodes on the network (paragraph 0020), equivalent to the claimed limitation of sharing bandwidth among correlated quality of service requests.

5. **Claims 2, 3, 10, and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Oosthoek in view of Karagiannis, as applied to Claims 1 and 9 above, and further in view of

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Trans et al (United States Patent Application Publication US 2003/0016770 A1), hereinafter Trans. The combination of Oosthoek and Karagiannis discloses all of the limitations of Claims 1 and 9, as described above. However, the aforementioned references do not disclose correlating microflows by comparing 5-tuples or source/destination addresses. In the same field of endeavor, Trans discloses providing quality of service on a per aggregate basis, wherein the aggregate is a set of two or more flows that share a common attribute (e.g., 5-tuple comprising source and destination address (paragraphs 0833-0834). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the 5-tuple-based aggregation disclosed in Trans with the resource reservation disclosed in Oosthoek, as modified above, in order to provide a level of assurance for consistent network data delivery (see paragraph 0030 of Trans).

6. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Oosthoek in view of Bolding et al (United States Patent 7,272,651), hereinafter Bolding. The combination of Oosthoek and Karagiannis discloses all of the limitations of Claims 1 and 9, as described above. However, the aforementioned references do not disclose a control means comprising a software module remote from a correlation means communicating via a communication protocol. In the same field of endeavor, Bolding discloses a router comprising separate modules (Figure 3), including a differentiated service entity 332 (correlating means) remote from an RSVP transmitter proxy 318 (control means). Further, Bolding discloses that the RSVP transmitter proxy 318 operates in accordance with RFC 2205 (column 7, lines 22-26), which is known to one of ordinary skill in the art to comprise program instructions. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the RSVP

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reservation disclosed in Bolding with the aggregated resource reservation requests disclosed in Oosthoek, as modified above, in order to reserve network resources on behalf of a multimedia server lacking RSVP capabilities.

7. **Claims 8 and 13** rejected under 35 U.S.C. 103(a) as being unpatentable over Oosthoek in view of Karagiannis, as applied to Claims 1 and 9 above, and further in view of Mohaban et al (United States Patent 6,788,647), hereinafter Mohaban. The combination of Oosthoek and Karagiannis discloses all of the limitations of Claims 1 and 9, as described above. However, the aforementioned references do not disclose anticipating microflows of return packets and to consider them to determine the correlated resource reservation requests. In the same field of endeavor, Mohaban discloses bi-directional QoS treatment for network data flows, wherein a packet is identified by its 5-tuple (source and destination IP address, source and destination port, and protocol) and given a quality of service treatment if a node determines that the packet is part of an already observed packet flow (column 8, lines 40-60; Figure 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the bi-directional QoS treatment disclosed in Mohaban with the aggregated resource reservation disclosed in Oosthoek, as modified above, in order to provide quality of service for bi-directional communications, such as symmetrical video conference call.

Response to Arguments

8. Applicant's arguments, filed September 28, 2009, with respect to rejection of Claims 1-14 under 35 U.S.C. 112, second paragraph, have been fully considered and are persuasive. The Claims 1-14 under 35 U.S.C. 112, second paragraph, has been withdrawn.

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9. Applicant's arguments, filed September 28, 2009, with respect to the rejection of Claim 1 under 35 U.S.C. 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground of rejection is made in view of the request aggregation disclosed in Karagiannis.

10. Applicant's arguments, filed September 28, 2009, with respect to the rejection of claim 2 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground of rejection is made in view of the 5-tuple-based aggregation disclosed in Trans.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW CHRISS whose telephone number is (571)272-1774. The examiner can normally be reached on Monday - Friday, 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

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like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andrew Chriss
Examiner
Art Unit 2472
12/18/2009

/A. C./
Examiner, Art Unit 2472

/William Trost/
Supervisory Patent Examiner, Art Unit 2472